#16

OIPE

RAW SEQUENCE LISTING DATE: 01/22/2003
PATENT APPLICATION: **US/09/500,700** TIME: 15:16:31

Input Set : **A:\SCRIP1160-4.ST25.txt**
Output Set: **N:\CRF4\01222003\I500700.raw**

```
      <110> APPLICANT: THE SCRIPPS RESEARCH INSTITUTE
            BARBAS III, Carlos F.
            GOTTESFELD, Joel M.
            WRIGHT, Peter E.
      <120> TITLE OF INVENTION: ZINC FINGER PROTEIN DERIVATIVES AND METHODS THEREFOR
      <130> FILE REFERENCE: SCRIP1160-4
      <140> CURRENT APPLICATION NUMBER: US 09/500,700
C--> <141> CURRENT FILING DATE: 2003-01-10
      <150> PRIOR APPLICATION NUMBER: US 08/863,813
      <151> PRIOR FILING DATE: 1997-05-27
      <150> PRIOR APPLICATION NUMBER: US 08/676,318
      <151> PRIOR FILING DATE: 1996-12-30
      <150> PRIOR APPLICATION NUMBER: PCT/US95/00829
      <151> PRIOR FILING DATE: 1995-01-18
      <150> PRIOR APPLICATION NUMBER: US 08/312,604
      <151> PRIOR FILING DATE: 1994-09-28
      <150> PRIOR APPLICATION NUMBER: US 08/183,119
      <151> PRIOR FILING DATE: 1994-01-18
      <160> NUMBER OF SEQ ID NOS: 127
      <170> SOFTWARE: PatentIn version 3.1
      <210> SEQ ID NO: 1
      <211> LENGTH: 32
      <212> TYPE: PRT
      <213> ORGANISM: Xenopus
      <220> FEATURE:
      <221> NAME/KEY: MISC_FEATURE
      <222> LOCATION: (1)..(1)
      <223> OTHER INFORMATION: Xaa is Tyr or Phe
      <220> FEATURE:
      <221> NAME/KEY: MISC_FEATURE
      <222> LOCATION: (2)..(2)
      <223> OTHER INFORMATION: Xaa is any Amino Acid
      <220> FEATURE:
      <221> NAME/KEY: MISC_FEATURE
      <222> LOCATION: (4)..(7)
      <223> OTHER INFORMATION: Xaa is any Amino Acid
      <220> FEATURE:
      <221> NAME/KEY: MISC_FEATURE
      <222> LOCATION: (9)..(11)
      <223> OTHER INFORMATION: Xaa is any Amino Acid
      <220> FEATURE:
      <221> NAME/KEY: MISC_FEATURE
      <222> LOCATION: (13)..(17)
```

p.6

RAW SEQUENCE LISTING DATE: 01/22/2003
PATENT APPLICATION: **US/09/500,700** TIME: 15:16:31

Input Set : **A:\SCRIP1160-4.ST25.txt**
Output Set: **N:\CRF4\01222003\I500700.raw**

61 <223> OTHER INFORMATION: Xaa is any Amino Acid
63 <220> FEATURE:
64 <221> NAME/KEY: MISC_FEATURE
65 <222> LOCATION: (19)..(20)
66 <223> OTHER INFORMATION: Xaa is any Amino Acid
68 <220> FEATURE:
69 <221> NAME/KEY: MISC_FEATURE
70 <222> LOCATION: (22)..(25)
71 <223> OTHER INFORMATION: Xaa is any Amino Acid
73 <220> FEATURE:
74 <221> NAME/KEY: MISC_FEATURE
75 <222> LOCATION: (27)..(32)
76 <223> OTHER INFORMATION: Xaa is any Amino Acid
78 <220> FEATURE:
79 <221> NAME/KEY: MISC_FEATURE
80 <222> LOCATION: (6)..(6)
81 <223> OTHER INFORMATION: Xaa may be missing
83 <220> FEATURE:
84 <221> NAME/KEY: MISC_FEATURE
85 <222> LOCATION: (7)..(7)
86 <223> OTHER INFORMATION: Xaa may be missing
88 <220> FEATURE:
89 <221> NAME/KEY: MISC_FEATURE
90 <222> LOCATION: (25)..(25)
91 <223> OTHER INFORMATION: Xaa may be missing
93 <220> FEATURE:
94 <221> NAME/KEY: MISC_FEATURE
95 <222> LOCATION: (29)..(29)
96 <223> OTHER INFORMATION: Xaa may be missing
98 <220> FEATURE:
99 <221> NAME/KEY: MISC_FEATURE
100 <222> LOCATION: (30)..(30)
101 <223> OTHER INFORMATION: Xaa may be missing
103 <220> FEATURE:
104 <221> NAME/KEY: MISC_FEATURE
105 <222> LOCATION: (31)..(31)
106 <223> OTHER INFORMATION: Xaa may be missing
108 <220> FEATURE:
109 <221> NAME/KEY: MISC_FEATURE
110 <222> LOCATION: (32)..(32)
111 <223> OTHER INFORMATION: Xaa may be missing
113 <400> SEQUENCE: 1

W--> **115 Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa**
116 1 5 10 15
W--> **119 Xaa Leu Xaa Xaa His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa**
120 20 25 30

123 <210> SEQ ID NO: 2
124 <211> LENGTH: 36
125 <212> TYPE: DNA

RAW SEQUENCE LISTING DATE: 01/22/2003
PATENT APPLICATION: **US/09/500,700** TIME: 15:16:31

Input Set : **A:\SCRIP1160-4.ST25.txt**
Output Set: **N:\CRF4\01222003\I500700.raw**

```
     126 <213> ORGANISM: Artificial Sequence
     128 <220> FEATURE:
     129 <223> OTHER INFORMATION: Primer for amplification of pZif89
     131 <400> SEQUENCE: 2
     132 atgaaactgc tcgagcccta tgcttgccct gtcgag                              36
     135 <210> SEQ ID NO: 3
     136 <211> LENGTH: 45
     137 <212> TYPE: DNA
     138 <213> ORGANISM: Artificial Sequence
     140 <220> FEATURE:
     141 <223> OTHER INFORMATION: Primer for amplification of pZif89
     143 <400> SEQUENCE: 3
     144 gaggaggagg agactagtgt ccttctgtct taaatggatt ttggt                     45
     147 <210> SEQ ID NO: 4
     148 <211> LENGTH: 273
     149 <212> TYPE: DNA
     150 <213> ORGANISM: Mouse
     152 <220> FEATURE:
     153 <221> NAME/KEY: CDS
     154 <222> LOCATION: (1)..(273)
     155 <223> OTHER INFORMATION:
W--> 157 <400> 4
     158 ctc gag ccc tat gct tgc cct gtc gag tcc tgc gat cgc cgc ttt tct      48
     159 Leu Glu Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser
     160 1               5                   10                  15
     162 cgc tcg gat gag ctt acc cgc cat atc cgc atc cac aca ggc cag aag      96
     163 Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly Gln Lys
     164             20                  25                  30
     166 ccc ttc cag tgt cga ata tgc atg cgt aac ttc agt cgt agt gac cac     144
     167 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
     168         35                  40                  45
     170 ctt acc acc cac atc cgc acc cac aca ggc gag aag cct ttt gcc tgt     192
     171 Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
     172     50                  55                  60
     174 gac att tgt ggg agg aag ttt gcc agg agt gat gaa cgc aag agg cat     240
     175 Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His
     176 65                  70                  75                  80
     178 acc aaa atc cat tta aga cag aag gac act agt                         273
     179 Thr Lys Ile His Leu Arg Gln Lys Asp Thr Ser
     180                 85                  90
     183 <210> SEQ ID NO: 5
     184 <211> LENGTH: 91
     185 <212> TYPE: PRT
     186 <213> ORGANISM: Mouse
     188 <400> SEQUENCE: 5
     190 Leu Glu Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser
     191 1               5                   10                  15
     194 Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly Gln Lys
     195             20                  25                  30
```

RAW SEQUENCE LISTING DATE: 01/22/2003
PATENT APPLICATION: US/09/500,700 TIME: 15:16:31

Input Set : A:\SCRIP1160-4.ST25.txt
Output Set: N:\CRF4\01222003\I500700.raw

198 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
199 35 40 45
202 Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
203 50 55 60
206 Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His
207 65 70 75 80
210 Thr Lys Ile His Leu Arg Gln Lys Asp Thr Ser
211 85 90
214 <210> SEQ ID NO: 6
215 <211> LENGTH: 22
216 <212> TYPE: DNA
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <223> OTHER INFORMATION: FTX3 primer
222 <400> SEQUENCE: 6
223 gcaattaacc ctcactaaag gg 22
226 <210> SEQ ID NO: 7
227 <211> LENGTH: 21
228 <212> TYPE: DNA
229 <213> ORGANISM: Artificial Sequence
231 <220> FEATURE:
232 <223> OTHER INFORMATION: BZF3 primer
234 <400> SEQUENCE: 7
235 ggcaaacttc ctcccacaaa t 21
238 <210> SEQ ID NO: 8
239 <211> LENGTH: 60
240 <212> TYPE: DNA
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: ZF36K primer
246 <220> FEATURE:
247 <221> NAME/KEY: misc_feature
248 <222> LOCATION: (22)..(41)
249 <223> OTHER INFORMATION: n is any nucleotide
251 <400> SEQUENCE: 8
252 **atttgtggga ggaagtttgc cnnkagtnnk nnknnknnkn nkcataccaa aatccattta** 60
255 <210> SEQ ID NO: 9
256 <211> LENGTH: 21
257 <212> TYPE: DNA
258 <213> ORGANISM: Artificial Sequence
260 <220> FEATURE:
261 <223> OTHER INFORMATION: R3B primer
263 <400> SEQUENCE: 9
264 ttgatattca caaacgaatg g 21
267 <210> SEQ ID NO: 10
268 <211> LENGTH: 21
269 <212> TYPE: DNA
270 <213> ORGANISM: Artificial Sequence
272 <220> FEATURE:

RAW SEQUENCE LISTING DATE: 01/22/2003
PATENT APPLICATION: **US/09/500,700** TIME: 15:16:31

Input Set : **A:\SCRIP1160-4.ST25.txt**
Output Set: **N:\CRF4\01222003\I500700.raw**

273 <223> OTHER INFORMATION: ZFNsiB primer
275 <400> SEQUENCE: 10
276 catgcatatt cgacactgga a 21
279 <210> SEQ ID NO: 11
280 <211> LENGTH: 66
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: ZF2r6F primer
287 <220> FEATURE:
288 <221> NAME/KEY: misc_feature
289 <222> LOCATION: (28)..(44)
290 <223> OTHER INFORMATION: n is any nucleotide
292 <400> SEQUENCE: 11
W/C> **293 cagtgtcgaa tatgcatgcg taacttcnnk nnknnknnkn nknnkaccac ccacatccgc 60**
295 acccac 66
298 <210> SEQ ID NO: 12
299 <211> LENGTH: 66
300 <212> TYPE: DNA
301 <213> ORGANISM: Artificial Sequence
303 <220> FEATURE:
304 <223> OTHER INFORMATION: ZFI6rb primer
306 <220> FEATURE:
307 <221> NAME/KEY: misc_feature
308 <222> LOCATION: (26)..(45)
309 <223> OTHER INFORMATION: n is any nucleotide
311 <400> SEQUENCE: 12
W/C> **312 ctggcctgtg tggatgcgga tatgmnnmnn mnnmnnmnnc gamnnagaaa agcggcgatc 60**
314 gcagga 66
317 <210> SEQ ID NO: 13
318 <211> LENGTH: 24
319 <212> TYPE: DNA
320 <213> ORGANISM: Artificial Sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: ZFIF primer
325 <400> SEQUENCE: 13
326 catatccgca tccacacagg ccag 24
329 <210> SEQ ID NO: 14
330 <211> LENGTH: 8
331 <212> TYPE: PRT
332 <213> ORGANISM: Artificial Sequence
334 <220> FEATURE:
335 <223> OTHER INFORMATION: Modified sequence of finger 1 of zif268
337 <400> SEQUENCE: 14
339 Arg Ser Asp Glu Leu Thr Arg His
340 1 5
343 <210> SEQ ID NO: 15
344 <211> LENGTH: 6
345 <212> TYPE: PRT

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/22/2003
PATENT APPLICATION: **US/09/500,700** TIME: 15:16:32

Input Set : **A:\SCRIP1160-4.ST25.txt**
Output Set: **N:\CRF4\01222003\I500700.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,4,5,6,7,9,10,11,13,14,15,16,17,19,20,22,23,24,25,27,28
Seq#:1; Xaa Pos. 29,30,31,32
Seq#:8; N Pos. 22,23,28,29,31,32,34,35,37,38,40,41
Seq#:11; N Pos. 28,29,31,32,34,35,37,38,40,41,43,44
Seq#:12; N Pos. 26,27,29,30,32,33,35,36,38,39,44,45
Seq#:32; Xaa Pos. 4
Seq#:37; N Pos. 10
Seq#:38; N Pos. 10
Seq#:39; Xaa Pos. 67